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# THE MEDICAL JOURNAL OF AUSTRALIA.

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No. 15.

## SOME ASPECTS OF INTESTINAL OBSTRUCTION.<sup>1</sup>

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Among the grave abdominal emergencies which we encounter in practice, intestinal obstruction has a sinister distinction, arising from the gravity and comparative frequency. In the early years of life it is not common, apart from such a distinctively infantile form as acute intussusception. Rarely an inguinal hernia at its first appearance in a baby may become strangulated.

With increasing years, many factors contribute to make its occurrence more frequent. It is not expedient to consider these in detail here. It will suffice to mention the more common causes of obstruction, such as bands and adhesions, the relics of former pathological changes in the peritoneum, the strangulation of the contents of hernial sacs of long duration, malignant and non-malignant strictures of the intestine and the final catastrophe of other and slowly progressive morbid changes inside the abdomen.

A brief reference to figures obtained from the Children's Hospital and from the Melbourne Hospital will serve to demonstrate in an imperfect way the fact that intestinal obstruction is for the greater part a disease of adult life. In the last year there were at the Children's Hospital 21 intestinal obstructions, made up as follows: intussusception, 18; strangulated hernia, 0; other forms of intestinal obstruction, 3. In the same year at the Melbourne Hospital there were 43 intestinal obstructions, comprising: strangulated hernia, 27; other forms of obstruction, 16. The average age of the adult patients was 63 and only 8 out of the 43 were below the age of 45.

Intestinal obstruction has notoriously a high mortality, which, according to hospital statistics, has shown no material diminution in the last twenty years or more.

Again there are many causes which contribute to bring about these deplorable results. Some of these will be discussed later, but it must be stated at once that the time factor is of paramount importance. Acute obstruction runs such a rapid course that the patient is only too frequently *in extremis* by the time surgical aid is sought. If surgery is to be curative, the diagnosis must be made before the patient has reached the stage of great abdominal distension and faecal vomiting. Recognition, without delay, of the serious significance of early symptoms and a prompt resort to operation, are necessary in order that we may attain good results.

This paper will be limited to a consideration of definite physical obstruction preventing the onward passage of intestinal contents. Accordingly, paralytic ileus will be excluded. It may result from many primarily extra-intestinal causes, such as torsion of the pedicle of an abdominal tumour or the

impaction of a renal calculus. Such a paralytic ileus, however, if it be not relieved, may produce the conditions of an actual mechanical obstruction and then the course is that of complete intestinal obstruction.

Intestinal obstruction may be usefully classified into:—

- (1) Acute intestinal obstruction.
- (2) Chronic intestinal obstruction.
- (3) Acute intestinal obstruction supervening on a long standing chronic obstruction.

### (1) Acute Intestinal Obstruction.

Let us first consider certain aspects of acute obstruction. Of many causes, the most frequent in adults is strangulation in an inguinal, femoral or umbilical hernia and in children the common and important type is acute intussusception.

The pathology may be briefly set forth as follows: At some place, or it may be in several places, there is an actual block to the onward passage of gut contents. The agent of obstruction frequently produces vascular and consequent nutritional changes in the bowel wall at the site of blockage. Below this the bowel is collapsed. Above it becomes distended with fluid and gas and this distension progressively affects an increasing length of bowel towards the stomach. The walls of this distended gut at first are thinned out, but before long they become inflamed and oedematous and tear more readily than healthy intestine.

The growth of bacteria from the lumen through the walls and so to the peritoneum is facilitated. In this way a wide-spread peritonitis ensues.

The cause of the distension is not yet plain, but one of the effects of this dilatation is the overstretching of the muscle fibres of the gut.

An overstretched muscle fibre is temporarily paralysed and a practical consequence of this temporary paralysis is that surgical removal of the cause of obstruction may yet leave a paralysed gut, which is unable to contract and get rid of its noxious contents. The obstruction is removed, but its evil effects remain.

### Clinical Signs and Symptoms.

The clinical signs and symptoms may be correlated with the pathology.

(1) *Pain*.—At the onset there is a sudden abdominal pain, which is succeeded by a series of colicky pains as the bowel makes ineffectual attempts to overcome the obstruction. These fade away as the intestine becomes paralysed and they are replaced or succeeded by the continuous wide-spread belly ache of peritonitis.

(2) *Vomiting*.—At or shortly after the onset of the initial pain, the patient vomits. The vomiting is repeated and becomes more frequent. The character of the vomitus alters. At first it is ordinary gastric contents, then it becomes bile stained, then more obviously bilious and smells unpleasant, till, finally, it becomes a dark fluid smelling abominably of putrefaction. This is the so-called faecal vomiting.

(3) *Constipation and Abdominal Distension*.—There is absolute constipation, with cessation of the

<sup>1</sup> Read at a joint meeting of the Victorian Branch of the British Medical Association and the Medical Society of Victoria on August 4, 1920.



passage of flatus. With the accumulation of gas and liquid in the bowel above the obstruction the belly becomes distended. It is greatest and most rapidly established in acute volvulus.

(4) *Signs of Poisoning and Dehydration.*—The patient is thirsty and weak, the tongue is brown and dry and the eyes are sunken. The pulse becomes rapid, small and irregular and the extremities are pinched and blue.

The higher up the obstruction in the alimentary canal till the second part of the duodenum is reached, the more urgent are the signs of obstruction and the more rapidly fatal is the result.

There is much to be explained in the pathology of intestinal obstruction.

If a vermiform appendix or Meckel's diverticulum becomes strangulated in a hernial sac, symptoms of intestinal obstruction result. Yet if a surgeon deliberately strangles the base of an appendix or diverticulum by a purse-string suture in removing these structures, no symptoms of obstruction result.

A knuckle of gut caught in a Richter's hernia gives rise to signs of intestinal obstruction, whereas a similar pouch of gut wall may be strangled by a purse-string suture in closing a perforation and no obstructive signs appear. Wherein lies the difference?

There appears to be some physiological device by which healthy, unobstructed bowel limits bacterial growth and putrefaction within it. The amount of gas which accumulates in the bowel after obstruction or after death is much greater than the amount which would be naturally expelled as flatus in the same time in the healthy living animal. The distension of bowel with fluid, the vomiting and the systemic poisoning have to be accounted for. Perhaps they have a common explanation: the failure of the antiputrefactive power of the bowel just referred to.

If we suppose a putrefaction in the intestinal contents, commencing at the damaged zone, just above and at the site of obstruction, acid decomposition products are formed. These acids will liberate the hormone secretin in the mucous membrane of the small intestine. This secretin evokes an outpouring of pancreatic juice and bile and intestinal digestive juice. But the putrefied material cannot pass on and putrefaction will continue in the banked-up secretions accumulating in the small intestine. So more acid, more secretin, more bile and pancreatic juice are produced in a vicious circle.

The normal small intestine contents are alkaline in reaction, but whenever I have had the opportunity of testing the reaction of long-obstructed small intestinal contents it has been acid and sometimes has remained acid for days after the establishment of an intestinal fistula.

This explanation would account for the accumulating of fluid in the obstructed bowels, for the vomiting of bilious fluid and later on of putrefied liquid (the so-called faecal vomit).

The absorption of the products of putrefaction from the bowel, the dehydration and possibly other blood changes due to the excessive secretion of alkaline digestive juices might explain the toxic and collapse symptoms which are so manifest late in the disease.

This theory may also explain the increased severity of obstruction the higher it occurs in the bowel.

The late Dr. Hutchings and Dr. Margaret Jamieson showed that the secretin-producing zone of the small intestine comprised its upper four-fifths. If the obstruction is low in the intestinal tract, it will take some time for the acid putrefactive column to rise to the secretin zone and the biliary and pancreatic outpouring will be delayed.

On the other hand, if the putrefactive changes commence high in the small intestine, the flooding of the bowel with bilious secretion will commence early. The grave symptoms may perhaps be due to a toxæmia produced by faecal bacteria.

I may remark here that I was on many occasions struck by the similarity of symptoms in men with recent war wounds overwhelmed by an acute infection by faecal organisms and the late symptoms of intestinal obstruction.

There was the similar copious bilious vomiting, the similar muddy complexion, with brown, dry tongue, pinched features, blue and cold extremities and the decided, though temporary, relief from infusing sodium bicarbonate solution into a vein.

Experimenters, however, have agreed that the most rapidly fatal obstruction is one situated in the second part of the duodenum. This is a part generally considered to be sterile.

These experimenters have, therefore, suggested that the signs and symptoms of acute intestinal obstruction are due to sudden derangement in the production of a supposed endocrine secretion of the epithelium of the duodenum and its appendages. The theory is, so far, too vague to enable us to devise any improved plan of treatment based upon it.

#### Diagnosis.

There is little to be said about the diagnosis of intestinal obstruction, though much might be said about the diagnoses of its several varieties.

In the first place, it should be made without waiting for the full development of signs and symptoms. A patient seized with sudden abdominal pain, followed by vomiting unassociated with diarrhoea, but unable to void flatus, in nearly every instance needs surgical treatment without delay. It is enough to suspect intestinal obstruction in such a patient. Further investigations will then be made and the diagnosis will be established.

One deceptive feature calls for comment. With the onset of the first griping pain there may be an urgent desire to defæcate and the lower bowel will be emptied of its contents. Perhaps the lower bowel does not empty itself in this spontaneous manner, but there may be a copious bowel action after the administration of an enema. Patient and medical attendant may then be deluded into believing that no obstruction can be present.

However, with a few doubtful exceptions, there is a complete failure to pass flatus. This evidence establishes the diagnosis.

If the enema has been unskilfully given, so that air is introduced into the bowel, the air will be expelled later and then may be mistaken for flatus. A mistake in diagnosis in infancy is most likely to be made in intussusception. This is most likely to be confused with acute ileo-colitis and the mistake is disastrous.

In colitis, the onset, though frequently sudden, is not so dramatic as in intussusception. Colitis is

more likely to be met with in an artificially-fed infant, intussusception in the constipated but otherwise healthy breast-fed baby. Palpation of the abdomen or digital examination of the rectum generally reveals the presence of a tumour in intussusception.

When a tumour is under the ribs and cannot be felt, a decrease in the resistance, or a diminution of the normal fullness in the right iliac region, is a sign of decided value.

In adults acute pancreatitis is very often diagnosed as acute intestinal obstruction and the error is not corrected till the abdomen is explored at operation. The symptoms and signs are very similar and perhaps are due to absorption of similar products of protein cleavage. In pancreatitis, cyanosis, epigastric pain and rigidity are more intense than in acute obstruction.

#### *Treatment.*

Avoidance of the use of purgatives is of the first importance, yet we meet with few patients who have not resorted to them before getting medical advice.

I shall not delay over the consideration of early cases. Their treatment is straightforward. The patients can be given a general anaesthetic with safety; the surgeon can deliberately relieve the obstruction and perform whatever surgical procedure may be appropriate to the condition of the bowel. Instead, I shall pass to the discussion of what should be done for a patient who comes before the surgeon with very advanced obstruction. Such a patient can rarely tolerate a prolonged or extensive operation and the surgeon must realize that his range of action is decidedly limited. His main problems are these:

- (1) To relieve or abolish the cause of obstruction with the least possible risk;
- (2) To prevent the continuance of absorption of poisonous substances from the intestine;
- (3) To endeavour to rectify the damage already done by toxic absorption and dehydration.

The following are suggested as answers to these problems:

- (1) Operation under local anaesthesia, confining intra-peritoneal manipulations to a minimum;
- (2) Establishment of a temporary intestinal fistula, to allow rapid drainage of the poisonous intestinal contents;
- (3) Intravenous injection of a 2% sodium bicarbonate solution, submammary and rectal saline infusion, alkaline drinks by the mouth;
- (4) The use of pituitrin injections in an endeavour to restore tone to the paralysed intestinal musculature.

#### *Choice of Anaesthetic in Advanced Intestinal Obstruction.*

(1) *General Anaesthesia.*—Though general anaesthesia has the advantage of giving great liberty of action to the surgeon, it is attended with definite risks and disadvantages for patients who are very ill.

- (i.) Risk of inspiration of fluid regurgitating from the stomach. This may be immediately fatal by suffocation, or fatal within a few days by setting up intense broncho-pneumonia.

- (ii.) General anaesthetics, especially chloroform,

are poisons. Their poisonous effects may be negligible in a healthy patient, but become of immense importance in a person already grossly poisoned by intestinal obstruction.

(2) *Spinal Anaesthesia.*—Spinal anaesthesia is associated with a great fall in blood pressure. This is very undesirable in patients who present evidence of grave circulatory embarrassment. In my opinion, a patient needs to be strong to tolerate spinal anaesthesia.

(3) *Local Anaesthesia*, produced by novocain or apothecin with adrenalin, is free from these defects. Its disadvantages are:

- (i.) Operative work is slower and the field of operation is limited.
- (ii.) There is probably a greater tendency for the infiltrated parts to become infected.

However, its advantages outweigh its disadvantages and I would urge its preference in advanced acute intestinal obstruction.

#### *The Treatment of the Intestine After Abolition of the Cause of Obstruction.*

I am considering only advanced acute obstruction where the bowel contains large amounts of highly poisonous fluid banked up behind the obstruction. Its walls are sodden and they present a lowered resistance to infection. The distended walls are paralysed, so that, even when the cause of obstruction has been removed, there is likely to be a delay in the restoration of contraction and peristalsis. Hence, if the obstruction is removed and the continuity of the gut restored, it is a common thing to find that there is no relief in the signs and symptoms of obstruction.

On the contrary, the rapid onset of peritonitis, a persistent or increasing abdominal distension and a more profound poisoning, culminating shortly in collapse and death, may be observed.

When healthy gut is resected and anastomosed, there is a temporary arrest of intestinal movement. If obstructed gut is resected and sutured, the septic bowel contents remain stagnating at and above the site of anastomosis. It is easy to understand that the conditions are favourable to the production of peritonitis, while the signs of obstruction remain or are intensified. Therefore, it seems highly desirable that this poisonous, infective material should be drained away from the bowel proximal to the obstruction. This is generally recognized and attempts at drainage have been made by incision, by puncture and aspiration and by passing up the interior a long glass tube, as recommended by Moynihan.

These procedures mean much handling of intestine and they are associated with some risk of peritoneal infection. Moreover, the drainage is only temporary.

The safest procedure in a patient whose survival is doubtful is to bring the obstructed loop out of the abdomen and to tie a tube into the proximal limb of the loop. Or the gut may be severed and its open ends fixed to the skin wound by a few sutures.

Either method drains away intestinal contents indefinitely. Some days or weeks later, when the patient has been relieved of the distension and absorption of toxic substances, the fistula should be closed. This is by no means an easy task and the patient may die of starvation if the closure of a fistula of the small intestine be too long delayed.

Nevertheless, by a temporary enterostomy, performed under local anaesthesia, many a patient with advanced obstruction may be saved who will die if a deliberate complete operative re-establishment of intestinal continuity be carried out under general anaesthesia.

### (3) Chronic Obstruction Becoming Acute.

The commonest cause is a ring cancer of the large intestine. A typical history is as follows: The patient is past or about middle age and suffers from a gradually increasing difficulty in securing regular and satisfactory emptying of the bowels. Attacks of colicky pain occur, perhaps associated with some vomiting and a varying amount of abdominal distension. There may be a history of occasional passage of blood and slime with the motions; attacks of diarrhoea may alternate with periods of constipation.

If the patient comes under observation at this stage, the history will excite a suspicion of obstruction probably due to a neoplasm.

Examination of the colon by X-rays, after the ingestion of an opaque meal, or after the administration of an opaque enema, may enable the diagnosis to be confirmed. A negative finding, however, does not exclude such a diagnosis.

Digital examination or examination by the sigmoidoscope may disclose the presence of a stricture in the lower bowel or rectum. Absence of cachexia or absence of palpable tumour must not be taken to mean absence of a malignant stricture. In the absence of hæmorrhage and sepsis, cachexia may be long deferred. The type of cancer which gives rise to obstruction is the small, hard, contracting growth, which gives an appearance to the bowel as if a piece of string had been tightly tied around it.

Such a cancer may easily escape detection, especially when the abdominal wall is thick.

The cancer which forms a large palpable tumour, frequently is not associated with signs of obstruction. However, a time comes when purgatives cease to relieve the constipation. It becomes absolute and the abdomen becomes acutely distended. Vomiting occurs and gradually becomes more frequent and of the type usually associated with acute obstruction. Too frequently this stage has been reached before the surgeon is consulted. The patient is greatly exhausted from the intestinal intoxication, by the pain and vomiting and perhaps by the onset of a wide-spread peritonitis.

### Diagnosis.

Generally, diagnosis is without difficulty. There are, however, two diseases which are occasionally confused with obstruction by a colonic neoplasm.

(i.) *Pyloric Stenosis*.—The resemblance is superficial. In each there is vomiting, pain, abdominal distension, loss of weight and constipation. The constipation is not absolute and is due to the small amount of material which enters the intestine through the obstructed pylorus.

(ii.) *Gall-Stones*.—A neoplasm in the colon, near the right or hepatic flexure, will give rise to colicky pains in the right hypochondrium, associated with vomiting and abdominal distension. These symptoms may be confused with the symptoms of biliary colic,

### Treatment.

The risk of sepsis, always more to be feared in operating on large intestine compared with small intestine, is enormously increased in the presence of obstruction. The problems here are:

- (i.) To relieve from the effects of obstruction;
- (ii.) To get rid of the neoplasm;
- (iii.) To restore the continuity of bowel, if possible.

In the presence of obstruction it is not safe to carry out all these demands in a one-stage operation. The relief of obstructive symptoms can be accomplished by making a fistula or artificial anus into the gut anywhere proximal to the stricture. According to the site of obstruction, this may be into the caecum, transverse colon, or sigmoid. A convenient method is to perform a caecostomy, by sewing a tube into the caecum by a series of superimposed purse-string sutures, in the manner of a Senn's gastrotomy. When the caecostomy is no longer required, the tube is removed and the peritoneal caecal walls then adhere and rapidly obliterate the fistula.

When the obstruction has been relieved by the establishment of a faecal fistula, at a second operation the growth is excised, with its corresponding lymphatics and the severed ends are anastomosed. The caecostomy or colostomy is then closed automatically or by operation.

If the growth is not suitable for removal, the patient must put up with a faecal fistula for the period which still remains to him of life.

If the growth, at its first discovery, is considered to be removable, another method which is of value is Paul's operation. A loop of bowel, having the growth in its middle, is brought outside the abdomen. The adjacent peritoneal surfaces are sewn together, so as to make a double-barrelled colon. The abdomen is then closed, with the loop hanging outside. A Paul's tube is tied into an opening made into the proximal obstructed limb of the loop and so the obstruction is relieved. Three days later the growth, with an ample amount of gut on either side and the intervening meso-colon, is cut off. This does not necessitate an anaesthetic. At the end of a week a broad pressure clamp is applied to the spur intervening between the two parallel limbs of gut. They are tightened day by day, till the intermediate spur sloughs through and intestinal continuity is established.

If the fistula does not heal of its own accord, it may be closed by an operation done under local anaesthesia.

Paul's operation leaves a weakness in the abdominal wall and probably removes less completely lymph glands which may have been invaded by carcinoma. It is, however, attended by a distinctly lower immediate mortality and in the long run is probably the safest operation for these colonic cancers with acute obstruction. The operation is not easy when the carcinoma affects a fixed portion of colon, such as the hepatic or splenic flexure or the descending colon. Even here, however, the gut may be mobilized by dividing the peritoneum of the posterior abdominal wall to the outer side of the colon and stripping it off by gauze dissection. Then the growth and mobilized colon are brought outside the abdomen and treated



as described. Still, it is a difficult procedure in a stout patient, or where there is great intestinal distention widely separating the anterior and posterior abdominal walls.

A specially difficult type is a growth at the ileo-caecal junction, causing obstruction of the ileum. For the reasons already stated, it is not good practice at a single operation to remove the terminal ileum, caecum and ascending colon and then to make an ileo-colonic anastomosis. It seems to me better to relieve obstruction first by making a temporary enterostomy into the terminal ileum.

Later, at a second operation, if the tumour is not suitable for extirpation, an anastomosis may be made between ileum and colon. If, however, the growth can be removed completely, the fistula, tumour and ascending colon may all be removed in one piece and the ileum is then anastomosed to the transverse colon.

#### THE RÔLE PLAYED BY THE PHYSICIAN AND SURGEON IN THE TREATMENT OF GRAVES'S DISEASE.

By W. J. Stewart McKay, M.B., Ch.M., B.Sc.,  
Sydney.

The perusal of Dr. Rennie's most thoughtful paper<sup>1</sup> reminds me that I have been operating on cases of Graves's disease for a quarter of a century and I think this is an opportune time to ask: "What is the rôle played by the physician and the surgeon in treating Graves's disease?"

The patient who is suffering from hyperthyroidism, is handed over to the surgeon now much more frequently than when I first began to operate on this gland; but I do not hesitate to say that the physician now often hangs on to his patient too long. Undoubtedly the patient inflicted with Graves's disease should have preliminary treatment before the surgeon is called in. As a matter of fact, I like to get the patient when she has had the disease about fifteen months. This treatment by the physician is amply justified when we come to ask ourselves: "What is Graves's disease due to?"

For many years we all noticed that a patient with tachycardia and exophthalmos usually had an enlarged thyroid, but that the intensity of the symptoms did not necessarily depend on the size of the goitre. The secretion of the thyroid was said to be the cause of the clinical syndrome and when Kendall's work was published and we found out that thyroxin was the active constituent and that this was a compound body containing much iodine, we immediately saw the meaning of some past observation, such, for instance, that if iodine were given to a patient who was suffering from goitre, some degree of hyperthyroidism could be produced. If, however, the thyroid was absent, the administration of the iodine had no effect on the patient, as, for instance, in cases of myxoedema.

Kendall is now able to tell us, not only that thyroxin produces the syndrome of hyperthyroidism, but that it also affects the nitro-metabolism; he has been able to state its action in a definite measurable

quantity. It looks at first sight, therefore, that we may dismiss the subject by saying that the presence in the blood of an increased quantity of thyroxin is the cause of Graves's disease. But probably it is not as simple as this.

Crile has shown in a very satisfactory way that there is a group of organs whose function is the conversion of potential into kinetic energy, the organs forming this system being the brain, the thyroid, the suprarenals and the muscles and liver. He designates these organs the kinetic system, whose function is to convert latent energy into motion or heat in response to stimuli. If the stimuli are too intense, the whole kinetic system, and especially the brain, becomes exhausted, or even permanently injured. He, therefore, considers shock to be the result of an intense stimulation of the kinetic system.

Applying the above to a consideration of Graves's disease, Crile holds that this is not a disease of a single organ, nor is it the result of some fleeting cause; but it is a disease of the motor mechanism of man, the mechanism by which physical action is being produced and the emotions exposed. The final exciting cause may be a stimulation emotion, an infection, auto-intoxicating, or any other stimulus to the kinetic system, as a result of which a pathological interaction is established between the brain and the thyroid. The pathological interaction may be broken by diminishing the thyroid output, thus allowing the brain to regain its normal control of the mechanism, or by securing physical rest, by which the brain will regain its normal control, which, in time, will cause the return of the thyroid to its normal activity.

I have for long taken Crile as my guide in matters connected with Graves's disease and the more experience I gain in this disease, the more I believe that we must clearly keep before our minds that the thyroid gland is a spot where is manufactured an iodine compound which determines the energy that any given cell within the body can produce on stimulation and which determines the quantities of energy that it is possible for any given cell to produce. That is the first thing to grasp. The second thing to admit is that, between the brain and the thyroid gland in Graves's disease, a pathological reciprocal interaction exists; consequently, operative treatment acts in two ways. It breaks part of the nerve connexion with the brain and it diminishes the quantity of the gland secretory structure.

Now, we all know that it is the occurrence of a condition of hyperthyroidism after the operation that makes this operation one of the most dreaded in surgery. All the improvements that have occurred in recent years in the technique of the operation aim at producing a post-operation condition attended by as little hyperthyroidism as possible.

The improvements that have taken place in the last twenty-five years may be considered under three headings: pre-operative, operative and post-operative.

With regard to the pre-operative preparation of the patient, it is on all sides admitted that the patient should undergo a course of treatment by the physician. One of the chief points that is to be attended to is rest. Dr. Rennie has called attention in his paper to the condition in returned soldiers known as

<sup>1</sup> The Medical Journal of Australia, July 31, 1920, page 93.

"shell shock" and he very rightly suggests that the primary cause of those symptoms is the emotional excitement incident to the conditions of life in the trenches. On all sides there is overwhelming evidence that emotion, fear, or shock has been the original stimulus in Graves's disease which affected the kinetic system and led to the pathological reciprocal inter-action between the brain and the thyroid, producing the clinical syndrome of enlarged thyroid, tachycardia and exophthalmos. Our aim should be to bring the patient into an environment devoid of factors that excite emotion.

The following case occurred in my practice a few years ago. A patient who had always been excitable, called at my rooms one day and said that her father had died and had cut her out of his will. This meant a loss of thousands to her. She returned in a month and, to my horror, she presented a perfect picture of Graves's disease.

Rest and quiet are the chief parts of the treatment before the operation. I have for years used atropine in this stage of the treatment. I order 0.0006 grm. twice a day and am satisfied that this helps to reduce the tachycardia and calms the patient. Adelin has proved such a wonderful sedative drug that I mean to give it a very extensive trial in preparing these patients in future. With regard to the question of anaesthetics, since I have had the good fortune to have Dr. Lidwill to administer ether by means of his modified intra-tracheal method, the anaesthetic has ceased to worry me. Many surgeons prefer to follow Crile and practice anoci-association and give nitrous-oxide-oxygen anaesthesia; when this can be carried out properly, it is an excellent plan.

With regard to the operation, I proceed to tell what I consider to be the secret of success. Now, this secret does not appear to have dawned on some of the surgeons in Melbourne, if I may judge from two cases that I have watched for some years. The first patient was operated on by a surgeon who has made this disease a special study and some ten years ago half her thyroid was removed. She improved, but later on the other side became hypertrophied and all her old symptoms returned. She went back to him three years ago and he removed the greater portion of the remaining side of the gland and she is now in excellent condition, though I have no doubt that her heart has suffered from the continuation of the disease in an active form during the last ten years.

The second patient was operated on by the same surgeon three years ago and one side only removed. She improved for a time, but is now as bad, if not worse, than before the operation. The left half of the gland is as big as a fist and she is suffering from a typical form of Graves's disease. In my opinion, that surgeon has not yet found the secret that dawned on me some five years ago. This secret is simply this: the whole of one side of the gland must be removed and nearly the whole of the second side. In fact, all that I now leave of the second gland is a small piece about the size of a Spanish olive. This, then, is the key to success. Since I have adopted this plan I have not had a single death from the operation and every patient has gone on well. In the old days, when I was content to remove half the gland and a bit of the other side, the patients did well at first, but after

five or ten years they returned, often as bad as ever. This extensive operation acts in two ways; it makes a diminution of the total quantity of the gland secreting thyroxin and it leaves a much diminished nerve connexion between the brain and thyroid. The wound is lightly packed with plain gauze; very little dressing is placed about the neck, so as not to muffle the patient. Continuous saline solution is administered by the bowel. The patient is encouraged to sit up in bed when conscious; if she complains of the bandage and dressing, these are taken off and a simple sterile gauze bib is tied round her neck.

When the hyperthyreoidic symptoms set in, morphine (0.015 grm.) is given freely and continued for forty-eight hours. This drug is invaluable and the more administered the better the effect at this stage, for it acts by dulling the emotion-receiving area of the brain.

Crile has recently made a suggestion which, should it turn out to be successful, will be a splendid contribution to the treatment of this condition. He finds that extensive ice packs will reduce the heart rate and temperature; this seems quite logical if we admit that the shock of the operation acting on the brain has caused the gland to give out more thyroxin, which has raised the metabolism in the whole body, with a consequent increase in pulse rate and temperature.

It might be thought that sitting the patient up in bed would increase metabolism, but Du Bois has shown that metabolism is greater in a patient lying flat in bed than sitting in a deck-chair position.

With regard to the continually discussed point: "Why does hyperthyroidism occur after operations on the thyroid in Graves's disease?" I have the following facts to record. I observed many years ago that, after operating on patients with Graves's disease who had myomata of the uterus, on several occasions they exhibited a more or less hyperthyreoidic condition for some days after the operation. In fact, the symptoms became quite alarming in some of the cases, although the thyroid had not been touched. Recently, I operated on a single woman, aged 35, who had all the signs and symptoms of Graves's disease and, in addition, had an immense ovarian tumour that filled the whole abdominal cavity. I determined to operate on the thyroid first, before attacking the abdominal tumour. Dr. Lidwill gave the ether in his inimitable way, using his own modification of the intra-tracheal method. I removed the whole of the right side of the gland and left a small portion only of the left gland. The patient's pulse and temperature ran up and she had intense hyperthyroidism. Two weeks later I opened her abdomen, thinking that I had to deal with a simple ovarian tumour; unfortunately, it turned out to be a complicated papillomatous cyst and the operation was prolonged for an hour. The patient exhibited exactly the same symptoms after this operation as after the first; the pulse and temperature ran up in the same alarming way, but both fell and were normal before she left the hospital.

Some years ago Barton Cook Hirst collected and studied 71 operations on various parts of the body, other than the thyroid gland, in patients suffering from Graves's disease. Many were minor operations and if the patient had not had Graves's disease a mor-



talities of, say, 1% would have been expected. The mortality was 15% and the cause of death in every instance was hyperthyroidism. The results show that the usual explanation that the manipulation of the gland has squeezed some extra quantity of thyroxin into the circulation is probably not correct. We must look for the cause of the hypothyroidism outside the thyroid gland. Bearing in mind what I have said above and remembering that the subject of Graves's disease is one in which the kinetic system is hypersensitive to stimulation, whether that stimulation has originated in trauma about the thyroid, or in some part distant from the thyroid, the stimulation having reached the brain cells, finds them already more or less affected by the disease and so the message sent down to the thyroid will depend on the amount of stimulation derived from the trauma and the added emotional factors connected with the operation. These determine the amount of thyroxin poured out, which may lead to auto-intoxication, the over-stimulation of other glands, such as the suprarenals, and by a riot of metabolic action to a degeneration of the cells in the brain that govern the action of the thyroid in its manufacture of thyroxin.

The never-ending work of Wilson has enabled him to say that there is a basis for a clinical and pathological correlation of the symptoms and morphological changes in the thyroid gland in Graves's disease. He has even been able to tell what the clinical symptoms were after examining the pathological condition of the cell of the alveolar epithelium.

With regard to the treatment of the patient after leaving the hospital, I recommend her to go away from the sea and lead a very quiet life for six months. It is most important to recognize the fact that this prolonged rest can help to repair the damage to the brain cells. Of course, there are cases that do not show much improvement and these are the cases where, through a mistaken trust in drugs, the physician has kept the patient under treatment so long that her heart is ruined for ever and no operation can ever restore such a ruined heart. Therefore, the chief part the physician has to play in the future treatment of Graves's disease is to prepare the patient by rest and quiet for the surgeon, whose aim is to lessen the pathological reciprocal inter-action between the brain and the thyroid. This is done in very severe cases by (1) ligaturing the poles of the thyroid by which means the blood vessels are severed and the nerves which gain access to the thyroid along all the vessels, are destroyed; or (2) by removing the greater part of the secretory substance of the gland. Naturally, when possible, the latter procedure is the one to be adopted.

## Reviews.

### PSYCHO-THERAPEUTICS.

The opponents and supporters of psycho-pathology have an opportunity in "Treatment of the Neuroses,"<sup>1</sup> by Dr. Ernest Jones, to obtain a compact idea of the up-to-date views of the British Psycho-Analytical Society, of which the author is the president, upon the various neuroses which

have lately assumed such prominence in medical literature. The writer lays claim to considerable experience in all methods of treating the neuroses and in his discussion of the different kinds of mental therapeutics he has advocated the use of each method rather than pointed out its shortcomings. He asserts that persons unaffected by neuroses certainly comprise the minority of the general population and as the majority of neuroses are unrecognized as such, the loss of social efficiency is great, owing to so many individuals turning out work under difficulties. According to the author, "inadequate" emotional reaction is responsible for all the "square pegs in round holes," who cause annoyance and inconvenience to those associated with them. Dr. Ernest Jones says that the study of the neuroses is essential to the understanding of the complicated problems of insanity, but here, as is usual in the writings of the psychopathologists, the claim for the psychical treatment of insane states is not supported by convincing evidence. To carry over the same discussion of complexes, conflicts, etc., into the realms of psychiatry is the ambition of every writer on psycho-pathology, but as only ten pages out of a book of 270 pages of text are devoted to psychiatry, alcoholism, sexual aberrations, criminality and miscellaneous anomalies, it appears as if the author recognizes that there is a difficulty in applying the same arguments to the satisfaction of the reader. In Chapter I. there is mention of the numerous and divergent views concerning the aetiology, classification, pathology, diagnosis, etc., of the neuroses. Chapter II. has 138 pages, in which the author discusses hysteria and generalizations for the treatment of all the neuroses. This chapter is written in Dr. Jones's customarily clever style, without which the monotonous reference to the infantile phantasies and psycho-analytic victories peculiar to the literature of psycho-pathology would make the work simply a synopsis of the arguments in favour of psycho-analysis. The writer's familiarity with all methods of mental therapeutics enables him to supply the reader with a considerable volume of information which would entail much reference to standard works if the reader wished to extend his knowledge of the subject. The different methods of mental therapeutics discussed are hypnosis, suggestion in the waking state, suggestion in the sleeping state, persuasion, education of will power, "side tracking," re-education, causal analysis, hypnoidization, psycho-synthesis, autogenesis, anagogic psycho-therapy and psycho-analysis. These various forms are graduated in an even ascending scale, which is designated the "activity criterion." This activity criterion "is the extent to which the patient himself is made actively to bring about changes in his mental functioning." Of course, psycho-analysis is the cream of the lot. According to Dr. Jones there are three simple or actual neuroses, *viz.*, neurasthenia, anxiety neurosis and hypochondria; and four psycho-neuroses, *viz.*, conversion hysteria, anxiety hysteria, fixation hysteria and obsessional neuroses. In the simple neuroses the aetiological factors are predominantly physical and in the psycho-neuroses they are psychical. To add to the confusion already existing in connexion with these neuroses we are told in Chapter III. that the symptoms grouped under the title of anxiety neuroses are usually included in the text books under that of neurasthenia. The cause of anxiety neurosis is said to be excessive and unrelieved sexual tension and the treatment is, so far as mental therapeutics is concerned, psycho-analysis. Anxiety hysteria has also a sexual cause referable to childhood. Neurasthenia is credited with being due to masturbation or to nocturnal pollutions preceded by dreams in which repressed sexual wishes come, either openly or in symbolic guise, to expression. In the severe form it may be necessary to employ psycho-analysis to effect a cure. Obsessional neuroses always refer to active sexual performances or tendencies and psycho-analysis is especially suitable for their treatment. Hypochondriasis is an abnormal sensitiveness of internal organs and fixation hysteria is a hypersensitiveness of external parts, including the respiratory passages. Both are of an erotogenic nature and psycho-analysis is the best treatment. Sufferers from hay fever and asthma will be pleased to know that their trouble is a fixation hysteria. The chapter on traumatic neuroses, including war shock, is rather disappointing. As in the other neuroses, repressed sexuality is intimately allied to the factor concerned in the production of this condition. Repressed sexuality is closely related to the

<sup>1</sup> Treatment of the Neuroses, by Ernest Jones, M.D., M.R.C.P.; 1920. London: Baillière, Tindall & Cox; Demy 8vo., pp. 253. Price, 10s. 6d. net.

morbid manifestations of fear; it is fear that is the central problem of war shock. There is a chapter on the prophylaxis of the neuroses in which the author discusses three chief aspects, *viz.*, individual hygiene, social organization and education. He considers that it is a hazardous proceeding for a neurotic to marry, because of the possibilities of psychical trauma in married life. The final chapter is a short summary of the application of mental therapeutics to other conditions than the neuroses. The first of these is the psychoses, the second is alcoholism; drug habits, sexual inversion, criminality and miscellaneous mental anomalies follow. Psycho-analysis is recommended for them all.

There is an extensive bibliography and the book is well indexed. Apart from the referring of everything to a sexual origin and recommending psycho-analysis for the treatment of practically all the neuroses, the book is very interesting and educative.

#### AUSTRALASIAN MEDICAL PUBLISHING COMPANY, LIMITED.

##### Annual Meeting.

The annual general meeting of members of the Australasian Medical Publishing Company, Limited, was held in the main building of the University of Queensland on August 24, 1920. In the absence of Dr. W. H. Crago, Dr. W. N. Robertson took the chair. The following is the report of the Directors.

##### Directors' Report.

The Directors submit their report for the past year and balance sheet at June 30, 1920, together with profit and loss account for the twelve months ended June 30, 1920.

The *Medical Journal of Australia* has now completed its sixth year. Its importance as a factor in the advance of medical science and its influence as the official organ of the Branches in Australia, have still further increased.

In regard to its position as a financial undertaking, the Directors are confronted with the difficult problem of making provision to meet a greatly increased cost of production and the uncertainty of obtaining paper. The contract with the present printers will expire at the end of September, 1920, and it has not been found possible to make new arrangements on terms anything like so advantageous as those obtaining in the past.

In respect of revenue, it is not thought advisable to raise the price for advertising space and it is not proposed to ask the Branches to pay more than at present for the *Journals* supplied to their members. The only course open to the Directors is to enforce such economies as will insure that the expenditure will not exceed the income.

Dr. W. N. Robertson and Dr. F. S. Hone retire from the Board of Directors in accordance with the requirements of the Articles of Association and are eligible and offer themselves for re-election.

W. N. ROBERTSON,  
Chairman.

August 24, 1920.

Dr. W. N. Robertson and Dr. F. S. Hone were re-elected Directors of the Company.

#### ST. VINCENT'S HOSPITAL, SYDNEY.

The annual report of St. Vincent's Hospital, Sydney, for the year 1919, has been issued in book form. It contains, in addition to the statistical and other information, illustrations of the hospital now and as it will be when completed, of the Out-Patient Department and the Norman Shelley Dispensary and of other interior and exterior scenes, and portraits accompanying the obituary notices of the late Dr. C. W. MacCarthy, Dr. W. C. Campbell Williams, Mr. Henry Austin and Dr. Percy Clifford.

From the annual report the following information has been culled. There were on the first day of the year 124 patients in the hospital. During the course of the year 2,187 patients were admitted and on the last day of the year 110 patients were still under treatment. Of these patients, 145 died and 2,056 were discharged. Among the

discharged, 1,768 were said to have been cured and 36 unrelieved. The death-rate calculated according to the usual formula was 6.6%. It is stated that twelve of the patients died within 24 hours of admission. If these deaths be deducted, the mortality rate works out at 6%. The percentage figures given in the annual report are incorrect.

The number of patients admitted during the year was lower than the number in any of the preceding seven years. The highest numbers were recorded in 1916 and 1917. In the latter year there were 840 more admissions than in 1919. The number of operations has also declined. In 1916 there were 3,019; in 1918 2,680 and in 1919 1,944. A large amount of work was conducted in the various out-patient and casualty departments.

From the statistical records of the diseases treated, it appears that 356 patients were admitted on account of influenza. In estimating the case mortality this number has to be reduced by one, as one of the patients was still under treatment at the end of the year. There were 63 fatal cases, which yields a case mortality of 17.7%. Of the 21 patients whose treatment for enteric fever was completed, six died. This represents just over a 28.5% mortality. Seven out of 50 patients died of acute pneumonia. There were 233 cases of appendicitis or typhilitis with two deaths. In 203 instances appendectomy was performed without a death. It is stated that only two deaths occurred after operation, notwithstanding the fact that 1,944 operations were performed. The tables contain a considerable amount of other information.

From the Department of Pathology and Vaccine Therapy Dr. P. E. Walton Smith provides a statistical report concerning the work carried out. It appears that 29 patients were treated with tuberculin and 55 with various vaccines. The usual number of diagnostic examinations, including chemical and bacteriological examinations of the urine, were conducted. In recording the results of tests for the agglutination of the *Bacillus typhosus* and for the deviation of complement in the diagnosis of syphilis, the usual loose terminology is employed. Apart from the objection to referring to these tests as "Widals" and "Wassermanns," it is in our opinion inexcusable to record the failure on the part of the serum to agglutinate the bacilli or to deviate complement from the hemolytic system in the presence of a suitable lipoidal antigen as a "negative reaction." Unfortunately, a negative result of these tests is not a "negative reaction"; the absence of agglutination or of complement deviation occurs in control tests in the absence of serum of any kind.

It is reported from the Radium Department that only 37 patients were submitted to radium treatment. In the year 1918 194 patients were treated in this manner. In the Radiographic Department the number of X-ray diagnoses was 1,245, while 95 patients were treated in this manner.

The total income from all sources was £113,362. An overdraft of £2,780 was needed to balance the account. The cost of maintenance per patient (calculated on 2,194 patients), was £6 14s. 0½d. per patient. The Government grant to this Hospital amounted to £1,250.

#### MICRO-CINEMATOGRAPHY.

A lecture on micro-cinematography will be delivered by Mr. A. J. Perrier before a special meeting of the Sydney University Science Society at the Geology Theatre of the University on Thursday, October 7, 1920, at 8 p.m. The lecturer will deal with botanical, zoological, geological and pathological subjects and will illustrate his remarks by means of micro-cinematographic films. The President and Council of the Science Society extend an invitation to members of the New South Wales Branch of the British Medical Association.

#### POST-GRADUATE COURSE.

The syllabus of the Post-graduate Course to be held in Melbourne during the second and third weeks in November will be published in our issue next week. Instructive lectures will be delivered by Dr. F. W. Wilkinson, Dr. Murray Morton, Dr. A. Jeffreys Wood and Dr. G. Horne on the first day.

## The Medical Journal of Australia.

SATURDAY, OCTOBER 9, 1920.

### The Quarantine Bill.

The *Quarantine Bill* is an apparently innocent measure, designed to improve the administration of quarantine, as applied to ships, their passengers and crews and their cargoes. Experience must be allowed to dictate necessary modifications of the law regarding the control of persons and goods entering the Commonwealth. The Federal Quarantine Department has recently issued a valuable service publication in which the Director of Quarantine and his officers give an interesting and most instructive description of maritime quarantine administration. A detailed review of this work will be published in our columns in a future issue. The majority of the provisions contained in the *Quarantine Bill* which was introduced into the Senate on July 22, 1920, by Senator Russell, are anticipated in this admirable service publication. There is one clause, however, which is in a somewhat different category from the rest. It is true that if enacted, this clause might render the administration of the quarantine officer easier. But the clause is not built up on the same solid foundation of administrative experience as the other clauses. Clause 75 of the principal Act is as follows:—

75 (i.) A quarantine officer may in the case of small-pox require any person subject to quarantine or performing quarantine to be vaccinated and any person so required to be vaccinated shall submit to be vaccinated accordingly.

(ii.) A quarantine officer shall not require any person to be vaccinated unless in his opinion vaccination is necessary for the protection of persons subject to quarantine or performing quarantine, or for the prevention of the spread of the disease of small-pox.

Clause 24 of the *Quarantine Bill* provides for the amendment of this clause to read as follows:—

(i.) A quarantine officer may require any person subject to quarantine or performing quarantine to be vaccinated or inoculated with any prophylactic or curative vaccine and any person so required to be vaccinated or inoculated shall submit to be vaccinated or inoculated accordingly.

(ii.) A quarantine officer shall not require any person to be vaccinated or inoculated unless in his opinion vaccination or inoculation is necessary for the protection of persons subject to quarantine or performing quarantine or for the prevention of the spread of the disease of small-pox.

At present a quarantine officer has the power to vaccinate every person subject to quarantine or performing quarantine in the presence of an outbreak of small-pox. He has no power to compel anyone to submit to vaccination for the purpose of a general campaign of protection against variola in the Australian community. The determination of the adoption of vaccination for this purpose is vested in the State Governments. Unfortunately the importance of thorough vaccination and revaccination against variola in the community is not properly recognized in the States, with the result that from time to time outbreaks of this disease occur. That the more recent epidemics of variola have been of a mild character is not due to any administrative action. It is the result of the chance introduction of a mild, little virulent type of infective organism. The next invasion may be by a deadly germ.

While every epidemiologist will endorse the wisdom of giving quarantine officers power to enforce vaccination in the presence of an outbreak of small-pox among the passengers or members of a crew of a ship arriving from a foreign port, it is a totally different matter when the prophylactic measure has not been proved to be effective. Vaccination is accepted as the most rational and certain method of eliminating small-pox. Under certain conditions prophylactic inoculation against enteric infections has effected a remarkable diminution of infection. Hitherto the suggestion has not been seriously made to compel the whole community to submit to prophylactic inoculation in an endeavour to stamp out enteric fever. It might, however, be expedient to require everyone in quarantine to submit to this procedure. Whether the determination should be in the hands of a quarantine officer or not is open to question. The safeguard against abuse contained in the second subsection is meagre, for it endows the single quarantine officer with power to decide whether in his opinion inoculation is necessary for the protection of persons in quarantine.

The bill, however, does not limit the application of prophylactic inoculation to enteric fever vaccines. We have recently passed through an epidemic of influenza. Many persons recommended universal inoculation with a vaccine which even the most enthusiastic advocate had to admit was not a specific



prophylactic against the disease. It would be intolerable if a medical officer were given the power to enforce submission to an inoculation, the efficacy of which is still denied by many competent scientists. Vaccines have been introduced for prophylactic purposes in connexion with other diseases. In many cases, no doubt, a considerable degree of immunity is induced by these vaccines, but there is as yet no definite evidence that their general application is a justifiable prophylactic measure. Until irrefutable evidence is forthcoming that no other means of prevention are as good and that inoculation with a given vaccine is reliable and efficient, no single medical officer should have power to apply it with or without the consent of the individual. It must be remembered that a capable officer will succeed to a large extent in persuading the majority of persons under his care to submit to a prophylactic measure, provided that he can adduce sound argument in its favour. Beyond this he should not go, until medical opinion is practically unanimous. It must further be remembered that, while the provisions of this bill are limited in their application to quarantine, once the principle has been introduced in a Commonwealth Act, its extension to the general community will probably follow within the course of a few years. It would be reasonable if the Federal authority sought and obtained powers to apply vaccination against plague to passengers and the members of the crew of an infected ship, since Haffkine's prophylactic inoculation has been shown to be of great value in protecting persons exposed to the infection of plague. Other specific diseases might be dealt with in a mandatory manner, not at the discretion of the quarantine officer, but the compulsion should be strictly limited to certain diseases. The proposal to apply the provision to any one of these diseases should be closely scrutinized by experts before it is included in the list. This is actually a matter concerning which the medical profession can give sound advice. Members of Parliament are bad judges in this respect.

#### THE SELECTIVE ACTION OF CELL LECITHIN.

Several years ago Overton and Meyer in a series of most ingenious experiments showed that the permeability of the cell membrane depended on its lecithin and cholesterol content. They found that oily solutions of lipoids exercised a selective adsorp-

tion on dyes. Moreover, they adduced evidence in favour of the hypothesis that the physical condition of the lipid constituent of the cell membrane determined the passage of metabolic products into and out of the cell. Their work in connexion with anaesthesia is well known. Lipoid solvents, such as ether and chloroform, effect a change in the physical condition of the lecithin, producing a partial or complete solution of the latter. In this stage the lecithin is endowed with the quality of being able to adsorb dye stuffs and possibly other bodies. These observers failed to demonstrate any power of the lecithin in solution to adsorb inorganic salts. It was held that the fact that the unequal distribution of salts within the cell and in the tissue fluids was incompatible with the hypothesis of the lecithin barrier of the cell. On the other hand there were many observations which apparently lent support to the hypothesis. For example, the demonstration that a frog immersed in warm water (of about 35° C.) immediately lost consciousness, which was restored when the frog was transferred to cold water, coincided with the experimentally ascertained change of the physical condition of the cell lipid of the frog's brain cells at that temperature.

Dr. J. Cruickshank has recently discussed at a meeting of the Pathological Society of Great Britain and Ireland some further data in connexion with this matter.<sup>1</sup> He found that ether is incapable of removing certain dyes from their watery solutions. The addition of lecithin to the ether, however, even in minute quantities, sufficed to transfer the dye from the water to the ether. Cholesterol proved inert in this action. Careful and painstaking efforts were made to remove the lecithin from the ether-lecithin-dye mixture. Acetone was used to dissolve the dye after the ether had been evaporated. After repeated extractions, it appeared as if all the lecithin freed from dye were left in the evaporating dish and all the dye free from lecithin were claimed by the acetone. It was, however, discovered that the dye was no longer soluble in water, but was freely soluble in ether and other fat solvents. The dye had thus acquired the solubility of a lipid while still retaining its original colour. Further experiments showed that many inorganic salts and some alkaloids were adsorbed in a similar manner by lecithin in ethereal solution. Moreover, the same property was demonstrable when ether extracts of serum and of other tissue containing lecithin were substituted for the purified lecithin. From these results, it would seem that additional support has been given to the suggestion that the cell membrane is composed of a mesh of protein enclosing lipoidal substances. As long as the lipoids retain their ordinary gelatinous consistence, the passage of inorganic salts and of the products of metabolism through the membrane goes on in an undisturbed manner. Whether the presence of certain chemical substances of the nature of the neutral or acid dyes in the tissue fluids would lead to the adsorption of these substances by the lipid and the disturbance of the functional activity of the cell is unknown. It would, however, appear that in the event of increased body heat or of the introduction

<sup>1</sup> *The Journal of Pathology and Bacteriology*, February, 1920.

tion of a lipid solvent, such as ether, the lipoids would be temporarily changed in their physical condition. Under this changed physical condition, the metabolism of the cell would be arrested. If under these circumstances a dye be brought into the tissue fluids, a more or less permanent impregnation of the lecithin in the cell envelop would result. Pharmacologists will no doubt ascertain whether these data cannot be put to practical use in pathological disturbances of certain groups of cells. It will first of all be necessary to determine whether the anchoring of the dye or analogous compound to the cell membrane leads to a damage to its normal permeability after the solvent has been removed.

#### SOME INVESTIGATIONS IN LOBAR PNEUMONIA.

The nature of the mechanism of the crisis in acute lobar pneumonia has long been a matter of discussion. The well-known fact that sudden alleviation of most distressing symptoms may occur without recognizable alteration in the physical signs in the chest, has led to the suggestion that the phenomenon of crisis might be explicable as the result of suddenly occurring protein desensitization, a condition of anti-anaphylaxis. In a recent investigation undertaken by Drs. H. M. Thomas and F. Parker,<sup>1</sup> with the object of typing the pneumococci in the sputum of patients suffering from lobar pneumonia, observations upon the existence of living organisms removed from the consolidated lung by *ante mortem* puncture are recorded. Lung puncture was performed by the insertion of a hypodermic needle through the chest wall and pleura to a depth of about 2.5 c.cm. into the mass of lung tissue over which the physical signs of consolidation were most marked. A few drops of blood-stained fluid obtained in this way were then cultured in broth and on blood agar.

Lung punctures yielding living pathogenic organisms were obtained on every day of the disease, including the period of critical fall of temperature and in two instances after the temperature had reached normal. On the other hand, negative results on culture of fluid removed by puncture were observed at a period of two to four days before crisis in patients going on to recovery. The results obtained from cultures in cases which terminated fatally, showed that the number of living organisms recoverable by lung puncture failed to diminish throughout the course of the disease, whereas when the course was favourable, a well-marked tendency for the number of living organisms to diminish during the pre-critical period of the disease was noted. The authors put forward the suggestion that there are two mechanisms at work in the limitation of the infection which they describe as bactericidal and detoxifying.

In this connexion it must be noted that the demonstration of a definite toxin in the blood or lung exudate in patients suffering from pneumonia analogous to the toxin produced in infections by the bacillus of diphtheria has not been satisfactorily established. There is in fact no demonstrable soluble pneumotoxin. Many observers regard the split products of proteins from the lung exudate as responsible for the "toxæmia" of pneumonia. Studies on the

action of immune serum administered to animals suffering from pneumococcal septicæmia have led to the belief that the activities of the serum are due to agglutination of the organisms and to the bacteriotropic power of the serum. These factors do not appear to offer a satisfactory explanation of the phenomenon of crisis.

The study of the results of lung punctures performed at different stages of lobar pneumonia has shown that the death of the organism in the lung does not occur in every case at the time of crisis, but may occur several days before or after crisis. It is therefore suggested that anti-bacterial forces may proceed at one rate of speed, whereas the detoxifying mechanism is going on at a different rate. The nature of the toxic substance in lobar pneumonia is imperfectly understood, but the demonstration of toxic split proteins does not finally exclude the possibility of a true toxin-antitoxin reaction. The authors conclude that the death of the pneumococcus is not the factor which causes or initiates crisis and that the anti-bacterial and detoxifying mechanisms act, in a measure, independently.

#### STREPTOCOCCAL VACCINES IN SPRUE.

Sir Leonard Rogers<sup>1</sup> has recently reported 44 cases of sprue treated by the injection of autogenous streptococcal vaccines. The results recorded up to the present time compare very favourably with the results following the older methods of treatment.

In reviewing the effects of vaccine treatment, only those patients who have been observed to remain well for a year, are regarded as cured, in view of the frequency of relapses, which were known to occur in patients returning to a tropical climate after the usual methods of hospital treatment formerly in vogue. It is stated that in no case did vaccine treatment fail to produce beneficial results, although relapses occurred in six patients, one of whom eventually died from pernicious anæmia. In the remaining five cases of relapse the treatment is said to have been stopped prematurely.

For the preparation of the vaccine cultures were made from the sore tongue or, in the absence of ulceration of the tongue, from the side of the tongue or the tonsil. An almost pure culture of streptococci was usually obtained and vaccine prepared from subcultures in the usual way. *Streptococcus salivarius* was frequently identified in cultures made in several cases by an independent observer working in Colombo. Doses are injected every five days, at first beginning with 50 millions. If no reaction occurs, the dose is rapidly increased to 100 millions, given once a week, and after several such doses it is further increased to 150 or 200 millions, given at intervals of ten days. The administration of bismuth salicylate in 1.5 to 2 grm. doses thrice daily is recommended so long as the stools are loose; this is reduced as soon as the diarrhoea is controlled. With the vaccine treatment the diet can be increased much more rapidly than with the older methods, bananas being recommended as a useful addition to the dietary. It is suggested that streptococcal infection of the alimentary tract may play a definite part in the aetiology of this disease.

<sup>1</sup> Archives of Internal Medicine, July, 1920.

<sup>1</sup> The Medical Times, July, 1920.

## Abstracts from Current Medical Literature.

### OPHTHALMOLOGY.

#### (113) Arterio-Sclerosis and the Eye.

P. H. Adams recognizes three forms of arterio-sclerosis affecting the eye: (i.) Hyperpiesia, characterized by simple high tension, without signs of arterial or renal disease. (ii.) Arterio-sclerosis, with associated high tension, renal and heart changes. (iii.) Chronic nephritis, with secondary high pressure, arterio-sclerosis and heart changes (*Brit. Journ. Ophthalm.*, July, 1920). Hyperpiesia is the most important group; if treated early it may be cured or checked; otherwise, it progresses to true arterio-sclerotic changes. High arterial blood-pressure, if not the direct cause, is one of the earliest signs of arterio-sclerosis. Toxic substances cause a hypertonic-contraction of the arteries and arterioles, resulting in hypertrophy of the muscular coat, diminution of their lumen and high pressure. Finally, obliteration of the capillaries and degenerative changes in the heart occur. The patients complain of fullness of the head, drowsiness, insomnia and fatigue, especially in the morning, inability to concentrate, migraine and many other symptoms. Such patients are often referred to the ophthalmic surgeon, who rarely finds an error of refraction sufficient to account for the condition. Bardsley claims that it is possible to indicate, roughly, the actual height of the blood pressure in mm. of Hg. from the observation of the retinal vessels alone. The author does not go as far as this, but regards the small size and pale colour of the arteries, the absence of the light reflex for a short distance up and down a vein, where it is crossed by an artery, as the most suggestive signs of increased pressure. Group II.—Marcus Gunn's classical signs of actual sclerosis are as follow: irregularity of the lumen of retinal vessels, tortuosity of the arteries, narrow central light streak, brighter at some points than at others, loss of translucency of the arterial walls, obstruction in the veins, when crossed by arteries, and oedema of the retina. Foster Moore emphasizes the deviation of the course of the vein, when crossed by an artery. The vein is diverted to lie alongside the artery, both before and after the crossing. Moore also describes an arterio-sclerotic retinitis, in the form of small, scattered white spots between the disc and macula and sometimes a partial star figure at the macula. The ophthalmoscopic appearances are the best indication of the general state of the vessels. Group III.—Here the primary lesion is in the kidney. In chronic parenchymatous nephritis the toxic factor is more prominent. "Cotton wool" patches are seen scattered about in the fundus. Retinal hæmorrhages are not plentiful and the macular star is not often seen. In chronic inter-

stitial nephritis the vascular factor predominates, the retinal vessels show signs of sclerosis, hæmorrhages are more plentiful and the macular star frequently present. The prognosis of arterio-sclerosis depends upon the condition of the kidneys, the arteries and the heart. It is more serious in young subjects, but the factor of greatest importance is the presence or absence of albumin in the urine. It is important to dispel anxiety and mental strain. The bulk of each meal should be reduced; there should be restriction in the use of alcohol, tea, coffee and tobacco. Undue exertion should be avoided. There is no need to forbid the patient to do close work. Referring to glaucoma, the author states that, while there is often an association between it and arterio-sclerosis, the connexion is by no means constant.

#### (114) Syphilitic Neuro-Retinitis.

In 460 syphilitics in a military hospital, Camp Lewer, H. V. Wurdemann found fourteen cases of optic neuritis (*Americ. Journ. Ophthalm.*, January, 1920). In only four of these had the patient observed diminution of vision. The ophthalmoscopic findings of neuro-retinitis present a great contrast to those of true choked disc, a case of which is depicted. This patient had a fractured skull. The optic nerve stood out like a button to the extent of 6 diopters. In true neuritis the swelling scarcely ever exceeds 2 or 3 diopters. The cause of optic neuritis is said to be the setting free of some toxin in the optic nerve itself, attended by infiltration in the blood vessel walls extending to the neuroglia, whereas the cause of choked disc is mechanical, due to increased intracranial pressure. The course of neuritis varies from weeks to months and may be followed by complete resolution, or it may go on to grey atrophy. The treatment consists in massive doses of the specific medication. In some cases diaphoresis and purging reduce the danger to the nerve fibres. In syphilis arsenic and mercury are the most powerful remedies. The author does not credit the reports of blindness from the use of therapeutic doses of arsenic. Experiments of rabbits with arsphenamin confirm this view.

#### (115) An Operation for Contracted Sockets.

R. R. Cruise describes the following procedure for contracted sockets (*Trans. Ophthalm. Society, U.K., Vol. XXXIX.*). An incision is made horizontally along the whole width of the inter-palpebral fissure, deep into the orbital tissues and prolonged up to the external and internal canthi. The conjunctiva is dissected upwards and downwards and is used to line the under surface of the lids by turning the freed portions respectively upwards and downwards and fixing them with sutures. The cavity is then further enlarged upwards and downwards, scar tissue being freely excised. Working upwards care must be taken not to cut the insertion of the levator. After bleeding has been ar-

rested by firm plugging, an exact mould is made of the cavity in dental modelling wax. A skin graft is taken from the inner side of the upper arm of sufficient size completely to envelope the mould. The mould is covered with the graft and it is slid into the cavity. The lid margins are sutured together for a fortnight.

#### (116) Corneal Ulcers.

O. C. Reiche gives Prince the credit of introducing "pasteurization" in the treatment of corneal ulcers and warmly advocates the method (*Pennsyl. Med. Journ.*, June, 1920). It has the advantage of destroying all pathogenic organisms, thus eliminating the necessity of making a differential diagnosis. The simplest and best instrument is a piece of metal, 15 cm. in length, with a bulb end the size of a small pea, which may be heated over a spirit lamp. The heated bulb should be brought to within 0.3 cm. of the ulcer and carried slowly round the margin for about 30 seconds. The instrument is then re-heated. The applications should be made by the surgeon twice daily. Cocaine is used sparingly. Atropine bichloride ointment and a bandage are also employed. In the discussion that followed, reference was made to the good result following 1% solution of ethyl hydrocuprein (optothrin) every two hours.

#### (117) Intra-Ocular Hæmorrhage After Guthrie's Section.

A. W. Sichel relates three instances of a rare complication following Saemish's or Guthrie's section for corneal ulcer (*Brit. Journ. Ophthalm.*, June, 1920). The first was a patient, aged 52, with hypopyon ulcer. Section was made under cocaine; next day the patient complained of pain and the lens in its capsule was found adhering to the pad. An hour later vitreous protruded in front of blood clot. The second patient was 54 years of age. Three days later the lens came away in its capsule, followed by vitreous. The third patient, aged 44, had a section performed and after two days the lens came away, followed by severe expulsive hæmorrhage. The operation was performed with a Graefe, transfixing the cornea through the ulcer.

#### (118) Magnesium Sulphate for Inflammation of the Conjunctiva and Cornea.

H. Kirkpatrick writes in advocacy of hypertonic solutions of magnesium sulphate (in strength from 8% to saturation) in the treatment of diseases of the conjunctiva and cornea (*Brit. Journ. Ophthalm.*, June, 1920). In ulceration of the cornea the surface is cleared in a striking manner. Internally, 0.9 gm. of urotropine is given every three hours. Cauterization and paracentesis are seldom necessary. A bandage is not generally used. Trachoma with secondary infection responds well and especially gonorrhœal ophthalmia. The solution is applied in an eye bath for five minutes every two or three hours. The eye is also irrigated,



## LARYNGOLOGY AND OTOTOLOGY.

## (119) Mycotic Otitis.

A young woman, *æt.* 27, with a history, according to her physician, of cicatrized pulmonary lesions of tuberculous origin, complained to C. J. Koenig of violent pains in the right ear, with uneasiness, tinnitus, itching and deafness of several days' duration. He diagnosed acute purulent otitis media. His findings (*Medical Record*, June 5, 1920) were a meatus full of whitish masses, resembling macerated epithelial debris, an eczematous condition of the meatal walls, a perforated drum membrane and purulent secretion in the tympanum. After thirteen days' treatment with Eustachian catheterization, douching and instilling drops of alcohol and peroxide into the ear, the perforation healed, the canal became healthy and hearing returned. The condition, however, recurred with great rapidity; even after twenty-four hours there was an appearance as of brown powder in the meatus, which, on microscopic examination, was seen to be composed of black, disc-shaped bodies, smaller than red blood cells. A culture of these revealed a typical growth of the mycelium and spores of *Aspergillus niger*. Koenig quotes authorities to the effect that cases of pulmonary mycoses have been observed to simulate pulmonary tuberculosis; in these the sputum contained acid-fast bacillary forms, indistinguishable from the bacilli of Koch. Other workers state that the bacilli of Koch often take on mycotic forms and that the tubercle bacillus should be classed with the moulds. Koenig thinks that the pulmonary condition from which his patient had recovered had been probably due to *Aspergillus niger*.

## (120) Dental Cysts of the Superior Maxilla.

The treatment of dental cysts of the superior maxilla entails a wide resection, by the buccal route, of the bony external covering of the cyst, with the dissection or opening and curettage of the cyst-wall. To avoid the persistence of a fistulous opening or the formation of an oral diverticulum, Jacques's method of removing the bony partition separating the cyst from the nasal fossa, after the cyst has been opened and its walls curetted, is advocated by Maurice Sourdille (*Journ. Laryng., Rhin., Otolaryng.*, July, 1920). The lips of the wound in the mouth are allowed to close and dressings and drainage are effected by the nasal route. If the fistulous opening persists, a plastic operation should be performed not less than six weeks later. The surfaces of the cystic cavity, as well as the inferior and lateral edges of the buccal opening, are refreshed, then a thick flap is cut from the inner aspect of the corresponding part of the upper lip or cheek, with its base above and its raw surface is brought downwards against the refreshed floor of the cavity. The vertical lips of the raw labial area are coapted with horse-hair or silk sutures,

thereby preventing the flap springing back into place; the pressure of the lip against the dental arch maintains it in the cystic cavity. The sutures may be cautiously removed after the tenth day, if the scar is sound.

## (121) Symptomless Influenzal Mastoiditis.

Francis F. Muecke and C. Grantham-Hill report a series of cases of very acute mastoiditis with few, if any, of the usual symptoms (*Lancet*, July 31, 1920). The most noteworthy features were: (i.) A very acute onset of ear-ache, occurring in the second or third day of a mild influenzal attack, comprising pyrexia, malaise, coryza and pains in the trunk and limbs. (ii.) The upper part of the drum was generally alone affected, displaying redness and bulging from the beginning. (iii.) Perforation occurred early, followed by unusual hæmorrhage lasting for several days, accompanied by complete relief of all pain. (iv.) The posterior meatal wall became red and swollen shortly after the appearance of the discharge. (v.) The discharge, at first slight, became on the second or third day profuse, coinciding probably with mastoid suppuration. (vi.) After perforation there were no symptoms other than discharge, i.e., no pain, pyrexia, increase of pulse rate, mastoid tenderness nor malaise. (vii.) On opening the mastoid, which was invariably of the pneumatic type, the chisel exposed soft, reddened, marrow-like bone, which showed early necrosis and absorption with the formation of large cavities full of pus. The extension was generally downwards and backwards. (viii.) The incomplete operation was performed in all cases, although in several the so-called "bridge" had already suffered necrosis. (ix.) The subsequent progress was unusually rapid and uneventful and in no case had the hearing been appreciably affected. (x.) In all cases streptococci of the hæmolytic influenzal type were found in large numbers. The authors emphasize the importance of the early recognition of the redness and swelling of the upper drum and postero-superior meatal wall, together with the continuance and especially the increase of the discharge in a case of otitis media following influenza.

## (122) Colloidal Silver in Purulent Meningitis.

P. Watson-Williams (*Journ. Laryng., Rhin., Otolaryng.*, July, 1920) reports the employment of colloidal silver, by intrathecal and intravenous infection, in a case of purulent meningitis (probably of labyrinthine origin) complicating mastoiditis and labyrinthitis. After the mastoid operation, the vestibule was uncapped and the cochlea opened. The wound was dressed with *collosol argentum* gauze packing. Improvement of the meningitis followed, but ten days later, presumably due to the discontinuance of daily lumbar puncture, there was an exacerbation of the headaches and the spinal fluid was found thicker and more purulent than before. The

condition rapidly cleared up under daily withdrawals of cerebro-spinal fluid and alternate intrathecal and intravenous injections of *collosol argentum*. As the intravenous injections seemed the more efficacious, the intrathecal were discontinued. *Collosol argentum* (3 to 5 c.cm.) was given daily, preceding the lumbar puncture. The symptoms soon disappeared and a complete recovery took place.

## (123) Antral Infection and Manganese.

In subacute and chronic infections of the maxillary antrum and other nasal sinuses, colloid manganese has been found by E. Watson-Williams to be of benefit (*Journ. Laryng., Rhin., Otolaryng.*, July, 1920). Equal parts of the two stock solutions of manganese are mixed in a sterile syringe and injected into the gluteus or deltoid muscle. The average dose is 1 c.cm. to 2 c.cm.. In subacute conditions injections are given daily or on alternate days, in more chronic cases twice a week. Four to seven injections are usually all required. The injection is painless and there is seldom any local or general reaction. The author considers that manganese increases the resistance to antral as to other coccal infections, that it is especially indicated in chronic conditions and that it improves the anæmia commonly associated.

## (124) Intrinsic Cancer of the Larynx.

From observations based on 44 cases of intrinsic cancer of the larynx treated by laryngo-fissure, St. Clair Thomson concludes that impaired mobility of a cord is not a necessary nor frequent symptom of the condition and is only met with in a minority of cases (*Lancet*, July 24, 1920). When the growth is embedded in the cord or growing into it, impaired mobility is more likely to be met with than in a sessile or even pedunculated tumour. It is more usual with growths situated on the inner surface or the sub-glottic area than with those seated on the upper surface of the cord. Otherwise, fixation indicates an advanced case. When present, it is valuable in distinguishing a malignant from an innocent tumour. It is of little value and may be misleading in diagnosing a malignant growth from a tuberculous or syphilitic deposit. An early diagnosis is desirable and inspection, age, sex, history and progress of the case all taken into account. Impaired mobility of a cord is an unfavourable symptom.

## (125) Functional Aphonia Treated by Hypnotism.

After being treated unavailingly by tonics, faradism, exposure to ammonia fumes and anæsthetization by chloroform and ether, combined with suggestion and encouragement, for nearly two years for loss of voice, of sudden onset, a young woman, *æt.* 25 years, was treated by hypnotism weekly for five months. At the end of that period she was again anæsthetized and completely recovered her voice. Reported by Dan McKenzie (*Proc. of Roy. Soc. Med.*, Vol. XIII., No. 2, December, 1919).

## British Medical Association News.

### SCIENTIFIC.

A joint meeting of the Victorian Branch and of the Medical Society of Victoria was held at the Medical Society Hall, East Melbourne, on August 4, 1920, Mr. G. A. Syme, the President, in the chair.

Dr. W. Dismore Upjohn, O.B.E., read a paper on intestinal obstruction (see page 353).

Mr. B. T. Zwar said that they were indebted to Mr. Upjohn for his able presentation of a very important subject; the paper held particular interest for surgeons attached to hospital staffs, as they were frequently called upon to deal with many of the problems discussed. He had been very interested in the explanation advanced by Mr. Upjohn of the rapid decline into bad condition constantly observed in patients with acute intestinal obstruction, but could not but feel that subphrenic pressure consequent on abdominal distension was a contributing factor. That this was so seemed indicated by the fact that relief of the distension was generally followed by a distinct improvement in the patient's general condition.

Drainage of the distended intestine was an all-important measure if life was to be saved. It had been his own practice in the presence of great distension to aspirate the bowel, if necessary, in several places. Aspiration rendered necessary manipulation much easier of performance, facilitated greatly the removal of the cause of obstruction and, by the relief of pressure, led to an immediate improvement in the general condition, as had often been remarked by the anaesthetist. He thought that the risks of sepsis attendant on aspiration of the intestine were possibly not so great as Mr. Upjohn feared; it seemed to him that it could be safely carried out by first running a purse-string round with a fine needle, inserting the trochar and cannula in the centre of the area enclosed by the suture and tightening the purse-string as the cannula was withdrawn. If, in addition to this precaution, the site of aspiration were well packed there would be no soiling of the peritoneum and the procedure might be repeated in various distended loops if necessary. He had found aspiration in this manner a very helpful procedure when the distension was extreme.

Mr. Zwar agreed that enterostomy was the soundest measure when the general condition was very severe. Regarding the significance of the passage of flatus or otherwise, he thought that there was no absolute rule. Now and again patients with intestinal obstruction would pass flatus, particularly when the blockage was situated high in the small intestine. He had had two experiences fairly recently, in both of which flatus was passed (in one instance pituitrin had been injected at the time of giving the enema); he had had no reason to think that air had been injected by the enema syringe. Both these patients were subsequently found to have a complete obstruction in the upper reaches of the small intestine. As mentioned by Mr. Upjohn, the large intestine might empty itself after an enema, even though obstruction be present higher up. Mr. Zwar concluded with an expression of thanks to Mr. Upjohn for his very interesting paper.

Mr. Balcombe Quick, D.S.O., said that, in following Mr. Upjohn's interesting and instructive paper, one or two points had occurred to him about which he would be glad of an expression of opinion from the meeting. Regarding the value or lack of value attaching to the procedure of washing out the stomach as a preliminary to a general anaesthetic in cases of intestinal obstruction, he remarked that, although it seemed to be a generally accepted measure, it had often seemed to hasten the patient's decease in desperate cases. There was not the slightest doubt that a stomach wash was very exhausting to patients suffering from intestinal obstruction, who were necessarily very ill; he was opposed to it as a routine measure.

He had resorted to aspiration of the intestine as described by Mr. Zwar and agreed as to its value. In a case in which aspiration had been employed and which subsequently came to post mortem examination, he had observed small points of pus under the sutures at the sites of puncture, but they had not led to any diffuse peritonitis.

Unless he was mistaken, in the discussion of intussuscep-

tion, Mr. Upjohn had not mentioned the value of examination under anaesthetic. Very light anaesthesia only was necessary and it was undoubtedly of great assistance; by its aid a tumour could be palpated in 100% of cases of intussusception in children. Mr. Quick expressed himself as not impressed with the lack of resistance in the right iliac fossa, the so-called *signe de dance*, in intussusception; he preferred to rely on palpation of the tumour under anaesthesia.

Mr. R. Hamilton Russell felt under some disadvantage in participating in the discussion, as he had heard only the latter part of Mr. Upjohn's paper. From what he had gathered, Mr. Upjohn had dealt chiefly with acute and complete obstruction, but there was no doubt that chronic intestinal obstruction also provided a wide and interesting field for discussion.

With reference to acute obstruction, Mr. Russell said that he had often been impressed with the remarkable powers of recovery exhibited by the bowel, even under what appeared to be most unfavourable circumstances. It was frequently very difficult to decide whether to make an enterostomy opening, or to return the bowel. An experience of many years ago recurred to him as illustrative of this particular point. During his former period on the staff of the Children's Hospital he was called upon to operate for intussusception in a small infant. The invagination was of some standing and was reduced with much difficulty. The child's condition did not permit of anything further than reduction and the return of the torn and discoloured bowel seemed equivalent to abandoning all hope. The child, however, did perfectly well. No doubt this was an extreme and fortunate case, but he had frequently observed that apparently badly damaged bowel would recover. Mr. Russell emphasized the value of castor oil when administered after a doubtful return of bowel.

In the presence of bad obstruction of the large bowel, especially about the sigmoid flexure, Mr. Russell considered that Paul's or a similar operation was the best procedure. His own practice was to bring the tumour to the outside, if possible, pass a finger, followed by a glass suture-reel through the mesentery and open the bowel. The operation was very simply done and could be accomplished with great rapidity in an exhausted patient. Once the knuckle of bowel was dealt with in this manner, it could not slip back.

Mr. Victor Hurley, C.M.G., quoted a case which had come under his observation within the preceding few days, in which the unreliability of enemata in obstruction of the small bowel was confirmed. Another very similar instance had occurred in his hospital practice within the last six months.

Keith had demonstrated the presence of neuro-muscular nodes along the course of the bowel. These nodes were especially well defined at the ileo-caecal junction and at the different flexures of the large bowel. It was reasonable to expect that these nodes exercised a more or less independent function, so that the alimentary canal did not contract as a continuous tube. The large bowel might, therefore, readily respond to the stimulus of an enema, even when there was complete obstruction higher in the small gut.

Mr. Upjohn had commented upon the fact that the partial occlusion of the lumen of the gut obtaining in a Richter's hernia was attended by all the signs of intestinal obstruction. In a recent case Mr. Hurley had encountered a hernia of this nature in the region of the inguinal canal; the patient exhibited the classical picture of obstruction high in the small bowel. Yet it was possible for the surgeon to occlude a similar portion of the lumen by means of a purse-string suture without bad effects.

Again, in torsion of the omentum, severe symptoms resulted and the condition was one of urgency, but if a similar piece of omentum were ligated surgically and returned, nothing happened; the omentum simply atrophied. The explanation of these facts was probably that of the degree of obstruction to the vascular supply; where this was completely cut off as by ligature or a purse-string suture, simple necrosis of tissue resulted, whereas in the less complete vascular obstruction, at onset, of a Richter's hernia, progressive infiltration and inflammation of the walls of the bowel resulted.

With regard to the condition of acute intestinal obstruction, such as was seen in strangulated hernia, Mr. Hurley



asked for an expression of opinion from the senior surgeons present as to the advisability of wide resection and suture or, alternatively, construction of an artificial anus.

Mr. G. A. Syme remarked that in a long surgical experience he had naturally been called upon to deal on many occasions with acute intestinal obstruction. As Mr. Upjohn had stated, the great trouble was, especially in hospital practice, that the patients came to the surgeon too late; hence the high mortality attending intestinal obstruction. It was essential that the general practitioner should maintain himself on the alert, not necessarily to diagnose these cases absolutely, but to recognize early the need for surgical intervention. It was too often found that purgatives and enemata had been continued for too long a time; even at the beginning of the illness, patients with acute intestinal obstruction were so obviously ill that it was surprising that the decision to send them to hospital or to seek surgical assistance was so long delayed.

With reference to the discussion which had centred upon the passage of flatus, Mr. Syme observed that both faeces and flatus might be passed when the site of obstruction was high, but that the negative aspect, *i.e.*, the absence of flatus, was of great value. The passage of flatus, although it did occur in cases of obstruction, was exceptional.

He had noticed that none of the speakers had referred to the important question of anaesthesia. Personally, he had had no experience of local anaesthesia in this connexion, but it appeared to him to be distinctly advantageous, especially as employed in recent years.

In cases of obstruction in the colon, Mr. Syme considered that the correct procedure was caecostomy; nothing more should be attempted until the patient had been brought into good condition. He was in agreement with Mr. Zwar regarding the advantages to be gained by aspiration where the abdomen was very distended; the relief of the distended bowel certainly rendered conditions much better for the surgeon's work. When the obstruction was placed in the pelvic or iliac colon, he almost always brought the bowel out, but not necessarily the obstruction, rapidly secured an artificial anus and at a subsequent operation removed widely the cause of the obstruction, including the colostomy. His objection to the operation of von Mikulicz and Paul was that it limited the extent of removal of the bowel and lymph field. At the emergency operation it was necessary to bring out a small loop only; after drainage of the bowel and improvement in the condition of the patient, the surgeon could proceed as for primary resection.

Mr. Syme referred to the point raised by Mr. Balcombe Quick regarding the utility of washing out the stomach to eliminate vomiting during anaesthesia. He had not adopted this procedure and, indeed, had been taken to task upon occasions for not doing so. But in his opinion the stomach wash-out was not worth while; regurgitation went on constantly during the manipulations of the operation and it was impossible to maintain the stomach empty, even though it were lavaged at the outset. Again, it was an exhausting experience for the patient and the benefits were not commensurate with the degree of "knock-out" involved.

He had been greatly interested in Mr. Upjohn's explanation of the pathology underlying the grave symptoms of acute intestinal obstruction. He had attributed a great deal to the nervous factor, *i.e.*, the profound effect on the sympathetic system. With regard to Mr. Hurley's inquiry, he considered that wide resection at the time gave the best results, but due regard had to be paid to the patient's ability to withstand the more severe operation.

Mr. Upjohn had presented to them a very important subject in a clear and able manner.

Dr. Upjohn, in reply, stated that he was in agreement with Mr. Zwar regarding the beneficial effect of puncture of the bowel. The relief of pressure was of great assistance in leading to an improvement of the patient's general condition. At the same time he had seen bad results in the *post mortem* room, which were apparently traceable to the puncture of sodden and friable bowel. In the presence of mere distension it was no doubt a good thing to do, but the condition of the bowel wall had to be taken into consideration.

In regard to the passage of flatus, he might say that he had not seen flatus passed apart from the use of enemata;

he had always thought it highly probable that air had been injected with the enema.

He was completely in accord with Mr. Quick and Mr. Syme regarding lavage of the stomach; it was undoubtedly very exhausting and the subsequent regurgitation could not be avoided.

With reference to examination under anaesthetic in the diagnosis of intussusception, Dr. Upjohn thought it was a valuable aid and that it ought to be carried out, but should not be repeated. He had come to rely a great deal on the lack of resistance to be made out in the right iliac fossa; perhaps he had been unduly impressed by an individual case, but in a recent experience, in which the usual tumour was placed under the rib margin and non-palpable, the *signe de dance* had been of great assistance.

The undermentioned have been elected members of the New South Wales Branch:—

Henry C. Barry, Esq., M.B., Ch.M., 1918 (Univ. Sydney), Ernest Street, Hunter's Hill.

Patrick Cockburn, Esq., M.B., B.S., 1914 (Univ. Adel.), New Lambton.

H. J. Daly, Esq., M.B., Ch.M., 1918 (Univ. Sydney), Dalhousie Street, Haberfield.

Eric F. Erby, Esq., M.B., Ch.M., 1918 (Univ. Sydney), Wigram Street, Granville.

J. M. A. Paling, Esq., M.B., Ch.M., 1920 (Univ. Sydney), Royal Prince Alfred Hospital, Camperdown.

Gavin B. White, Esq., M.B., Ch.M., 1920 (Univ. Sydney), Royal Prince Alfred Hospital, Camperdown.

Arthur L. Dawson, Esq., M.B., 1911 (Univ. Sydney), 183 Macquarie Street, Sydney.

Norman Ross Smith, Esq., M.B., Ch.M., 1920 (Univ. Sydney), Royal Prince Alfred Hospital, Camperdown.

Cecil Uren, Esq., M.B., 1915, Ch.M., 1919 (Univ. Sydney), 450 Miller Street, North Sydney.

William H. Ward, Esq., M.B., 1920 (Univ. Sydney), Royal South Sydney Hospital.

Victor R. Woodhill, Esq., M.B., Ch.M., 1920 (Univ. Sydney), Royal Prince Alfred Hospital, Camperdown.

William Broad, Esq., M.B., Ch.B., 1899 (Univ. Glasg.), Rosedale Avenue, Manly.

The undermentioned have been nominated for election as members of the New South Wales Branch:—

Athol Walter Mobbs, Esq., M.B., 1909 (Univ. Sydney), Balmain.

Bruce McNeil Beith, Esq., M.B., Ch.M., 1916 (Univ. Sydney), Gunnedah.

#### THE STATE CHILDREN OF NEW SOUTH WALES.

(Continued from Page 351.)

The Royal Commissioner has endeavoured to teach the Board how to carry out its duties by suggesting a new classification of the inmates of the Home. He proposes to distinguish eleven types of children. The classification is not an original one, but is merely a re-arrangement of the existing division. He proposes to establish separate homes for boys committed for "crimes" such as breaking, entering and stealing, wilful damage, etc., for boys committed for the same "crimes" who are also "highly sexually immoral," for boys committed as neglected children living under conditions tending to a life of vice and crime, for boys who after discharge have again misbehaved, for boys who have been troublesome, for boys who have been troublesome and are sexually immoral, for boys who cannot be boarded out on account of some constitutional weakness, for mentally defective boys who have not been charged with any offence, for normal boys whose natural guardians cannot afford to provide them with trade education, for boys who have been discharged and have later been deprived of private guardianship and for half-caste aborigines. He would exclude from the industrial school section all children who had not been committed at the courts. The subdivision, as proposed by Mr. Allard, would involve the erection of a very large number of homes. In one of them there would be but two inmates. In others there would be a small number, while the rest would be still overcrowded. Apart from the waste



that would be entailed by the erection of these houses, the scheme is obviously impracticable. It would not have been proposed at the present juncture by anyone with practical knowledge of the conditions. During the past few years additional accommodation has been provided and further accommodation is still needed. There does not appear to be any necessity to disturb the excellent practical classification now obtaining.

Mr. Allard indulges in a general criticism concerning the practice of premature discharge on account of good behaviour. It not infrequently happens that the Superintendent of a Home recommends the discharge of an inmate before the completion of his term, as a reward for improved behaviour. "It sometimes happens, however, that the discharge is not obtained until a considerable period has elapsed from the time of the Superintendent's recommendation; and not infrequently boys so detained inquire why they are not allowed to leave." Mr. Allard states that in some instances the postponement of the discharge "tends to relaxation of the reform spirit." The children are aware of the fact that their earlier discharge is a concession and not a right. Mr. Allard has failed to grasp this point. If difficulty be experienced for a time in finding suitable guardians for these children and if, in the interval, the improved conduct is not maintained, it is obvious that the Superintendent's recommendation has been premature.

There is an institution in Paddington called "Hillside" for the training of State girls in domestic duties. Mr. Allard has arrived at the conclusion that all classes of girls are sent to this home. The Board takes great care to keep this home for girls who have been found to be more or less unmanageable by their parents or by private guardians. The home serves a very useful purpose and the criticisms made by Mr. Allard are unjustifiable. Mr. Allard deals briefly with the Parramatta Cottage Homes and especially with those reserved for the feeble-minded. He states that in the No. 1 Home the majority of these inmates were mentally deficient, some of them with vicious tendencies and that five of the girls were of normal mentality. In the No. 2 Home he objects to the presence of a girl described in the following terms: "Normal mentality; committed from a County Court to Parramatta Industrial School on account of immoral conduct, but was sent to this home on account of her youth; regarded as an unfit companion for any girl." The description is alarming. Mr. Allard, however, does not take into consideration the fact that in a home containing 16 inmates the Matron can exercise very effective control. The Board has long since sought to provide additional accommodation in order to give effect to the segregation of the various types of mentally deficient girls.

In dealing with the provision of relief granted by the Board under Section 16 of the *State Children's Relief Act* for the support of children not removed from their own mothers, the Royal Commissioner devotes six foolscap pages to a detailed discussion of two cases out of a total of 3,814 applications. He states that the Board has worked under a liberal interpretation of the Act and has even exceeded its powers to some extent. As he approves of the methods adopted, he does not blame the Board. We would call attention to the fact that Mr. Allard has been unable to discover more than two cases in which he regards the action of the Board as clumsy and dilatory. In the first case a widow with five children applied for relief in February, 1915, on account of destitution. Her husband had deserted her and her one infant. Later she had four children by a drunken bootmaker, with whom she lived. This man, too, subsequently deserted her. From Mr. Allard's account it would appear that the Board endeavoured to bully this woman by withholding assistance because she refused to allow her children to be boarded out and by the institution of an unnecessary number of investigations. It was admitted that in 1913 the woman was about to give birth to a child whose father had boarded with her after release from gaol. Notwithstanding the warped method of presentation of the details of the case, it is obvious that the President of the Board recognized the necessity of a strenuous endeavour being made to remove the six children from the baneful influence of this woman's home. It is usual in these circumstances to require the father of the illegitimate children to contribute towards their support. In many cases the Board has

to contend with collusion between the father and the mother and an obvious intention of the former to evade his responsibilities. By granting relief without adequate safeguard to a woman who refuses to part with her children, the Board would be encouraging the mother to continue her irresponsible method of living. We would feel inclined rather to criticize the Board's action in granting relief at all than endorse Mr. Allard's strictures in regard to delay. The reply to Mr. Allard's statement: "The bullying attempt to compel this woman to part with her children by refusing sustenance is to be wholly condemned," made by Sir Charles Mackellar and published elsewhere is highly significant. He said: "I might have made myself exceedingly popular by granting aid to hundreds of applicants who, on investigation, were found to be unworthy. I have not the slightest doubt that Mr. Green has had the same difficulty in dealing with this matter."

The second case was that of a woman whose husband had died, leaving his widow and five young children without money or means of support. The woman expected to be confined in a month's time. From the very long account given by Mr. Allard we gather that a subscription was raised in the town where this woman resided and resulted in the collection of £59 5s. 9d. and, further, that the husband's life had been insured for £750. The Board agreed to the proposal that provisions should be supplied to this woman, pending further inquiries. At a later date the Public Trustee notified the Department that the insurance money was in part security in connexion with a mortgage on a farm. The title of the property was extremely complicated and arrangements were made to make the sum of about £30 a year available for the benefit of the widow and her six children. It is difficult to follow Mr. Allard, when he distinguishes very pointedly between the granting of relief by monetary payments and the adoption of an expedient, pending inquiries, of allowing the woman to obtain stores and other necessities on credit. It may be admitted that the investigations were spread over a very long time and, further, that the accounts were not paid by the Department until satisfactory evidence was forthcoming that the woman herself had not the means to support herself and her children. The only persons who suffered at all by this cautious action on the part of the Board were the tradesmen, who had to wait for their money.

#### Conclusion and Recommendations.

Mr. Allard's conclusions and recommendations may be summarized as follows: He finds that the representations contained in the letters of complaint presented to the Premier of New South Wales have not been substantiated. The allegations against the officers of the Department of Public Instruction fail. He cannot absolve the State Children's Relief Department from blame in grouping juvenile offenders and other children in the industrial schools, homes and institutions under the Board. He recommends that the Parramatta Industrial School for Girls should be replaced by a series of cottages as soon as funds be available and that variation by the Minister of the recommendations of magistrates concerning the disposal of juvenile offenders should be made only in cases of obvious error or upon the reception of further information. In regard to the Gosford Home for Boys, he recommends the keeping of an elaborate register and the appointment of a matron. In regard to the Mittagong Farm Home he recommends the separation of institutions for the detention of juvenile offenders from the homes for invalid and other State children. He holds that State wards against whom no offence is alleged, should not be sent to the industrial school section. He recommends that more strenuous efforts should be made to find suitable private guardians for children after they have undergone a reasonable period of detention in the industrial school section. He thinks that a child should not be re-admitted to the industrial school for repeated offences, except on committal from the properly constituted court. He presents his new classification for inmates of the industrial school, referred to above, and recommends reclassification of the invalid, crippled and mentally deficient children. He thinks that particular care should be exercised to segregate the mentally deficient from the mentally normal. He wishes to segregate the sexes, except in cases of infants and very young children. He does not approve of the employment

of young girls of unsatisfactory character as assistants in homes for the feeble minded. He wishes to divide the aborigines and half-castes from white children. He urges that the superintendents should be more fully informed concerning the records of their charges.

He wishes the Hillside Home at Paddington to be used for the detention of girls whose offences and characters warrant a less strict disciplinary treatment than that obtaining at Parramatta. He suggests that admission to this Home should be through the children's courts. He also recommends fuller accommodation. He urges the rectification of the present indiscriminate grouping of mental deficient, State wards of normal mentality and juvenile offenders in the Parramatta Cottage Homes Nos. 1, 2 and 3. He would exclude women of normal mentality from the Eastwood Home for feeble-minded mothers and their babies. In regard to the hostels for women with children, he recommends regular inspection; he would have these hostels situated in secluded positions. He suggests the payment by women in daily employment of the cost of maintenance. The Raymond Terrace Home should be reserved for boys committed under the *Neglected Children and Juvenile Offenders Act*, who should be subjected to proper medical examination. He disapproves of the grouping of innocent State children with children awaiting trial or offenders committed and he demands the separation of boys from girls. Ormond House at Paddington should be under constant supervision. There should be greater discrimination in grouping children and adolescents under the care of the State Children's Relief Board. The present practice of indiscriminately grouping boys awaiting trial at the Court or remanded from the Court or awaiting transfer after committal with innocent State wards should be discontinued.

Nine recommendations dealing with the granting of relief in regard to children not removed from their mothers are included. He would amend the Act to include women whose husbands are incapacitated from various causes and in suitable cases to unmarried women. He proposes that greater energy be applied to the prosecution of fathers who fail to contribute to the maintenance of their children. He asks for greater expedition in the granting of relief and a general bracing up of the activities of the departmental officers. He thinks that more liberal support should be given to mothers in destitute circumstances and also recommends certain modifications of the law for the better application of relief.

In regard to the system of boarding out, he considers that more energy should be displayed by the Board in finding suitable homes for children. The work should be entrusted to special officers and not to the inspectors. He pleads for a medical examination of all children before being placed with private families, in order to prevent the spread of infective disease. In his opinion vocational training should not be limited to the special section of State children.

In dealing with the notification of births, Mr. Allard holds that unnecessary expense might be saved by limiting the duty to the cases of illegitimate births.

He advocates the provision of additional office room for the Board. He would take steps to render the inquiries of unmarried girls with infants concerning accommodation in hostels less public than at present. He regards the records as being insufficient and recommends that a more complete system should be instituted. He also holds that more frequent inspection should be carried out in regard to the circumstances of families receiving relief under Section 16 of the *State Children Relief Act*.

He expresses the opinion that the chief executive officer of the Department should not occupy the position of President. He would wish the chief executive officer to visit the institutions under the Department's control less frequently than at present, to enable him to devote more time to his administrative duties. Moreover, he advises that the Department should act not as an administrative body, but as a supervisory and advisory body. He advocates the appointment of a special magistrate and of a physician expert in psycho-pathology and neurology as members of the Board.

In regard to control he recommends that the Department should be administered by a permanent head. From the general indications included in the body of the report, it would

appear that he favours the existing system of the Department being under the ministerial direction of the Department of Public Instruction.

He makes some suggestions in regard to the prevention of overlapping. Concerning the Children's Court he wishes to effect a separation of the work connected with the question of the prosecution of children and that connected with affiliation orders and the like.

Under the heading of mental deficient he makes the proposals that all children coming under the control of the Board should be examined by a psycho-pathologist and neurologist to determine the state of their mentality. He approves of the recommendations of Sir Charles Mackellar contained in his report as Royal Commissioner.

Finally he asks for the consolidation of the acts relating to children.

These recommendations remind us of the famous utterance by Mr. Gladstone in reply to Lord Beaconsfield: "The Right Honourable gentleman has said some things new and some things true. Those things which are true, are not new and those things which are new, are not true." The recommendations are in part excellent. These have been made over and over again by Sir Charles Mackellar and Mr. A. W. Green. In part they are absurd and impracticable. These are Mr. Allard's own. For the rest they are unacceptable and reveal a failure of the Royal Commissioner to grasp the administrative and essential problems involved. There is so much that does not correspond with fact in the report that we are forced to assume that opportunity could not have been given to the Board to meet the counter-charges made by the persons referred to above. It is beyond question that the State Children's Relief Board under the presidency of Sir Arthur Renwick, Sir Charles Mackellar and Mr. A. W. Green has achieved signal success. Under the successive administration of these gentlemen the lot of destitute and neglected children has improved out of recognition. The Board is not perfect and many reforms are urgently needed. It is, nevertheless, regarded as one of the best institutions of its kind in the whole world. The fact that the infantile mortality in New South Wales has fallen from about 110 to 59 as a result of the introduction of the *Dairies Supervision Act* and of the four acts relating to children is sufficient evidence of the competence of the Board to carry out its functions.

The death is announced of Dr. Henry R. Hurry, a former student of the Melbourne University, who had recently come to Australia. Dr. Hurry died suddenly on September 24, 1920, at the Commercial Travellers' Club in Melbourne.

## Proceedings of the Australian Medical Boards.

### VICTORIA.

The undermentioned have been registered, under the provisions of Part I. of the *Medical Act, 1915*, as duly qualified practitioners:—

- Bennett, Charles Harold, M.B., B.S., Melb., 1920, Raymond Street, Sale.
- Cass, Namon Lewis, M.B., B.S., Melb., 1920, 58A Queens Crescent, Mt. Lawley, Perth, W.A.
- Clarke, Burnett Leslie Woodburn, M.B., B.S., Melb., 1920, 29 Wattle Road, Hawthorn.
- Cust, Austin Donaldson, M.B., B.S., Melb., 1920, 8 Kintore Street, Camberwell.
- Dale, Norman Roy, M.B., B.S., Melb., 1920, c/o. Westley and Dale, 31 Queen Street, Melbourne.
- Duncan, William Laurence, M.B., B.S., Melb., 1920, 54 Mangarra Road, Canterbury.
- Elszele, Lawrence Victor, M.B., B.S., Melb., 1920, 18 De Graves Street, Parkville.
- Foreman, George Edwin, M.B., B.S., Melb., 1920, Mt. Pleasant, Carlsruhe.
- Francis, Shirley Elliston, M.B., B.S., Melb., 1920, c/o. H. Francis & Co., 280 Bourke Street, Melbourne.
- Hanly, Edward Joseph, M.B., B.S., Melb., 1920, Beech Forest.

James, Gwilym Tallesin, M.B., B.S., Melb., 1920, Box 12, Hay, New South Wales.  
 Joske, Ernest Alexander, M.B., B.S., Melb., 1920, Burke Road, East Camberwell.  
 Mallon, James Edmund, M.B., B.S., Melb., 1920, Ringwood.  
 Male, Lindsay Gordon, M.B., B.S., Melb., 1920, 85 Broadway, East Camberwell.  
 Pearce, Harrie Edward, M.B., B.S., Melb., 1920, 30 Pleasant Street, Ballarat.  
 Reid, Jeanie Lawson, M.B., B.S., Melb., 1920, "Huntly," Boundary Road, Burwood.  
 Schwartz, Zelman, M.B., B.S., Melb., 1920, 77 Queens Road, Melbourne.  
 Troup, James Amess, M.B., B.S., Melb., 1920, 166 Victoria Street, North Melbourne.  
 Wallace, Hugh Gilmour, M.B., B.S., Melb., 1920, "Hybrasil," Hampton Street, Hampton.  
 Whitehead, Hebben Hoffman, M.B., B.S., Melb., 1920, "Croydon," Corryong.  
 Woods, Leslie Samuel, M.B., B.S., Melb., 1920, Albury, New South Wales.  
 Yaffa, Isaac Valve, M.B., B.S., Melb., 1920, 79 Albert Street, East Brunswick.  
 The following additional qualifications have been registered:  
 Frank Longstaff Apperly, M.D., Oxford, 1920.  
 Athol Stanley Mortimer Tymms, M.B., 1913, M.S., 1916, Melb.

### Medical Appointments.

Dr. Cecil G. Allen (B.M.A.) has been appointed for twelve months on probation as Junior Resident Medical Officer by the Department of Mental Hospitals of New South Wales. Under the provisions of the *Workers' Compensation Act, 1915*, Dr. J. Jona (B.M.A.) has been appointed a Certifying Medical Practitioner and Medical Referee at Melbourne. During the absence on leave of Dr. R. W. Lethbridge (B.M.A.), Dr. Henry Rogerson (B.M.A.) has been appointed Acting Medical Superintendent of the Hospital for the Insane at Sunbury, Victoria. The appointment dates from September 14, 1920.

### Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, locum tenentes sought, etc., see "Advertiser," page xxii.  
 Royal Alexandra Hospital for Children, Sydney: Honorary Radiographer.  
 Camooweal Cottage Hospital, Queensland: Medical Officer.

### Medical Appointments.

#### IMPORTANT NOTICE.

Medical practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429 Strand, London, W.C.

Branch.	APPOINTMENTS.
<b>NEW SOUTH WALES.</b> (Hon. Sec., 30-34 Elizabeth Street, Sydney.)	Australian Natives' Association. Balmaln United Friendly Societies' Dispensary. Friendly Society Lodges at Casino. Leichhardt and Petersham Dispensary. Manchester Unity Oddfellows' Medical Institute, Elizabeth Street, Sydney. Marrickville United Friendly Societies' Dispensary. North Sydney United Friendly Societies. People's Prudential Benefit Society. Phoenix Mutual Provident Society.

Branch.	APPOINTMENTS.
<b>VICTORIA.</b> (Hon. Sec., Medical Society Hall, East Melbourne.)	All Institutes or Medical Dispensaries. Manchester Unity Independent Order of Oddfellows. Ancient Order of Foresters. Hibernian Australian Catholic Benefit Society. Grand United Order of Free Gardeners. Sons of Temperance. Order of St. Andrew. Australian Prudential Association Proprietary, Limited. Mutual National Provident Club. National Provident Association.
<b>QUEENSLAND.</b> (Hon. Sec., B.M.A. Building, Adelaide Street, Brisbane.)	Australian Natives' Association. Brisbane United Friendly Society Institute. Stannary Hills Hospital.
<b>SOUTH AUSTRALIA.</b> (Hon. Sec., 3 North Terrace, Adelaide.)	Contract Practice Appointments at Renmark. Contract Practice Appointments in South Australia.
<b>WESTERN AUSTRALIA.</b> (Hon. Sec., 6 Bank of New South Wales Chambers, St. George's Terrace, Perth.)	All Contract Practice Appointments in Western Australia.
<b>NEW ZEALAND: WELLINGTON DIVISION.</b> (Hon. Sec., Wellington.)	Friendly Society Lodges, Wellington, New Zealand.

### Diary for the Month.

Oct. 12.—Tas. Branch, B.M.A.  
 Oct. 12.—N.S.W. Branch, B.M.A., Ethics Committee.  
 Oct. 14.—Vict. Branch, B.M.A., Council.  
 Oct. 14.—Q. Branch, B.M.A., Council.  
 Oct. 15.—Eastern Suburbs Med. Assoc. (N.S.W.).  
 Oct. 15.—Central Southern Med. Assoc. (N.S.W.).  
 Oct. 16.—Northern Suburbs Med. Assoc. (N.S.W.).  
 Oct. 19.—N.S.W. Branch, B.M.A., Executive and Finance Committee.  
 Oct. 20.—West. Aust. Branch, B.M.A.  
 Oct. 26.—N.S.W. Branch, B.M.A., Medical Politics Committee; Organization and Science Committee.  
 Oct. 27.—Vict. Branch, B.M.A., Council.  
 Oct. 28.—Q. Branch, B.M.A., Council.  
 Oct. 28.—S. Aust. Branch, B.M.A.  
 Oct. 29.—N.S.W. Branch, B.M.A.  
 Nov. 1 to 10.—Vic. Branch, B.M.A.; nominations of candidates received for election to Council.  
 Nov. 5.—Q. Branch, B.M.A.

#### EDITORIAL NOTICES.

Manuscripts forwarded to the office of this journal cannot under any circumstances be returned.  
 Original articles forwarded for publication are understood to be offered to *The Medical Journal of Australia* alone, unless the contrary be stated.  
 All communications should be addressed to "The Editor," *The Medical Journal of Australia*, B.M.A. Building, 30-34 Elizabeth Street, Sydney.  
 (Telephone: B. 4885.)